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## 2009 ANNUAL WATER QUALITY REPORT

Dear Consumer:

The City of Yonkers' Bureau of Water is pleased to present our Annual Report describing the quality of your drinking water. This report provides an overview of our drinking water quality for calendar year 2009. Included are details about where your water comes from, how it is treated, the importance of conservation and source water protection, what it contains and how it compares to State Standards. The City of Yonkers is proud to report that in calendar year 2009 our Water System had no violations and that our System was in compliance with all State and Federal Drinking Water Regulations. For information about this report or any other drinking water issue you would like to personally discuss, please contact Mary Anne Wyatt-Dolan, Assistant Superintendent of Water, at (914) 377-6764. For more information about contaminants and potential health effects call the [Westchester County Department of Health](http://www.westchestercounty.org/health) at (914) 813-5000. More information is also available on the World Wide Web at [www.awwa.org](http://www.awwa.org).

### Where does our water come from?

The City of Yonkers obtains its drinking water from New York City Water Supply System, an unfiltered surface water. Most of this water originates from two protected watershed areas, the Catskill and Delaware, located west of the Hudson River in upstate New York. The New York City Department of Environmental Protection's (NYC DEP) Bureau of Water Supply, Quality and Protection oversees the operation, maintenance and protection of this upstate reservoir system; consisting of 19 reservoirs and 3 controlled lakes. On average over a billion gallons per day of water travels down through two NYC DEP owned and operated aqueduct (tunnel) systems, the Catskill and Delaware, to feed the Kensico Reservoir located in Westchester County. Under normal operations the waters are blended here before traveling further south to the NYC Hillview Reservoir located in Yonkers, New York. Before the water arrives at the Hillview Reservoir it enters our system at several locations. In addition, water also enters the Yonkers' System from the Westchester County Water District #1 (WCWD #1) Kensico Line. From these points of entry, the water enters 374 miles of distribution piping to serve the 196,086 residents of the City of Yonkers through 30,335 metered service connections.

### Source Water Assessment Findings

The New York State Department of Health (NYSDOH) has evaluated the susceptibility of water supplies statewide to potential contamination under the Source Water Assessment Program (SWAP). Summarized in the paragraphs below are their findings related to our source of supply the Catskill/Delaware watersheds. It is important to stress that these assessments were created using available information and only estimate the potential for source water contamination. Furthermore, elevated susceptibility ratings do not mean that source water contamination has or will occur for this Public Water System (PWS). Please be advised this PWS provides treatment and regular monitoring to ensure the water delivered to consumers meets all applicable standards. Specifically the reservoirs in the Catskill/Delaware watersheds, a mountainous rural area, are relatively deep with little development along their shorelines. The main water quality concerns associated with land cover is agriculture, which can contribute microbial contaminants, pesticides and algae producing nutrients. There are also some potential contamination concerns associated with residential lands and associated wastewater discharges. However, advanced treatments which reduce contaminants are in place for most of these discharges. There are also a number of other discrete facilities, such as landfills, chemical bulk storages, etc. that have the potential to impact local water quality, but large significant water quality problems associated with these facilities are unlikely due to the size of the watershed and surveillance and management practices.

Furthermore, the NYC DEP has implemented a series of programs to evaluate and protect source water quality within these watersheds. Their efforts focus on three important program areas: the enforcement of strengthened watershed rules and regulations; the acquisition and protection of watershed lands; and implementation partnership programs that target specific sources of pollution in the watersheds. Additional information on the water quality and protection efforts in these New York City watersheds can be found at DEP's web site at [www.nyc.gov/html/dep/html/watershed\\_protection/home.html](http://www.nyc.gov/html/dep/html/watershed_protection/home.html).

### Facts and Figures

In 2009, a total of 9.66 billion gallons of water entered our distribution system. Of that total, 7.48 billion was purchased from New York City, 2.18 billion from WCWD #1 and 4.42 million from the Town of Greenburgh. This yielded an average daily citywide consumption of 26.5 million gallons with an average daily per capita usage of 135.1 gallons. Approximately 90 % of the total amount of water that entered our system was billed directly to customers. The balance, or unaccounted for water [10 %], was used for fire fighting purposes, hydrant flushings to maintain water quality, hydrant use for street sweeping, distribution system leaks (main breaks and service leaks) and unauthorized use. In 2009, the average annual water bill for a family of 4 ranged between \$250-\$300. Residential water rates in the City of Yonkers were increased in May 2009 from \$1.27 to \$1.40 per 100 cubic feet (748 gallons).

### How is the City of Yonkers' Water Treated?

The water obtained from the New York City Aqueducts is initially treated upstream at the Kensico Reservoir by the NYC DEP, with the addition of chlorine, to comply with New York State and Federal disinfection requirements and a low level of fluoride (pursuant to the NYC Health Code Article 141). According to the US Centers for Disease Control and Prevention (CDC), fluoride is very effective in preventing cavities when present in drinking water at an optimal range from 0.8 to 1.2 mg/L [parts per million]. To ensure that the fluoride supplement in your water provides optimal dental protection, the NYSDOH requires that the NYC DEP monitor fluoride levels on a daily basis. According to the NYC DEP, none of their 2009 monitoring results showed levels that approached the 2.2 mg/L maximum contaminant level (MCL) for fluoride. During 2009, fluoride was not continuously supplied in the NYC Catskill and Delaware Systems due to repair work on the fluoride feed system. Fluoridation on the Catskill System was offline 17% of the time with the longest period of interruption being 43 days, from July 25, 2009 through September 6, 2009. Fluoridation on the Delaware System was offline 16% of the time with the longest period of interruption being 23 days, from September 22, 2009 through October 15, 2009. According to the NYSDOH these brief interruptions in fluoridation are not expected to have a significant impact on dental health. Meanwhile, the water that enters the Yonkers' System from the WCWD #1 Kensico Line is initially treated upstream, at Kensico by Water District #1, with the addition of sodium hypochlorite to meet New York State and Federal disinfection requirements and sodium hydroxide and phosphoric acid (as orthophosphate) to meet New York State and Federal Corrosion Control Regulations. Consequently, during calendar year 2009 the high service sector of northeast Yonkers, located along the east and west corridor of Central Park Avenue north of Palmer Road, received unfluoridated water. Therefore, these residents may want to discuss with their family dentist if some other form of fluoride supplement should be considered for dental protection. You can confirm if your area is receiving unfluoridated water by calling the [Water Bureau](http://www.water.bureau.ny.gov) at (914) 377-6765. Before all this water enters our distribution system, it is again treated at our points of entry with chlorine gas, to provide a detectable chlorine residual at representative points in the distribution system, and corrosion control treatment; the addition of sodium hydroxide (caustic soda), to raise the natural pH of the source water, along with the addition of phosphoric acid (as orthophosphate), to coat the interior surface of the pipe walls [especially lead pipes and surfaces], in order to control the amount of lead and copper released into the consumer's tap water from household plumbing and lead service lines.

### Capital Improvements

In our continuing efforts to improve and maintain our Water Bureau's infrastructure and to comply with existing and future State and Federal Regulations, the City of Yonkers' Bureau of Water implemented the following capital improvement projects during calendar year 2009: In December 2009, 3,000 lineal feet of newly installed 12 inch diameter water main and control valves were placed into service in the Crestwood section of the City (Scarsdale Road between Crisfield Street and Kennedy Place, Kennedy Place, Westchester Avenue, St. Eleanora's Lane, Hothorn Avenue and Agnola Street). These new mains and control valves will provide a redundant source of supply to the Crestwood low service sector of Yonkers. Rebuilt two centrifugal water pumps, an 8 Million Gallon a Day (MGD) and a 4 MGD, to improve domestic pressure and fire flow availability, especially during peak demand periods, in the northwest, north central and central high service pressure zones of the City. Commenced the construction of the North Broadway Improvement Project. This project consists of installing 9,600 lineal feet of 20 inch diameter main, 2,600 lineal feet of 16 inch diameter main and 1,200 lineal feet of 12 inch diameter main between Gateway Road and Ashburton Avenue. As of December 2009, 2956 lineal feet of 20 inch diameter water main was installed and placed into service. Upon completion this project will improve domestic pressure and fire flow availability in the high service pressure zones of northwest Yonkers. Furthermore, during calendar year 2009 the Water Bureau inspected 680 fire hydrants, repaired 167 and replaced 85 inoperable hydrants as part of its ongoing Hydrant Replacement Program. This program ensures that the Fire Department has operational hydrants for fire protection. Water Bureau personnel also repaired 80 main breaks, replaced 27 inoperable gate valves, replaced/installed 257 water meters, investigated 662 leaks, installed 99 water taps and 13 wet connections and performed 2,712 code 753 mark outs of the City's underground water mains, requests made by other underground utilities prior to their digging. The following capital improvement projects are scheduled for calendar year 2010: A city-wide leak detection survey. This study will identify system water losses occurring from undetected leaks. The subsequent repair of these undetected leaks will reduce the City's unaccounted for water losses and water purchase costs. Continue the rehabilitation [cleaning, repairs and painting] of the City's elevated water storage towers. This work is needed to extend the life expectancy of the existing tanks. Finalize the design and installation of back-up emergency generators, security lighting and Intrusion Detection Security Systems for several of our water treatment, water storage and pumping facilities. Continue replacing worn out water treatment and Laboratory equipment. Furthermore, several Professional Service Contracts have been implemented to perform electrical upgrade Designs at our water treatment, storage and pumping facilities. They include: new electrical services, power distribution systems and installation of high service variable frequency drive pumps.

### Health Information

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the [EPA's Safe Drinking Water Hotline \(1-800-426-4791\)](http://www.epa.gov/safewater) or [contacting them on the World Wide Web at www.epa.gov/safewater](http://www.epa.gov/safewater). The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations, which limit the amount of certain contaminants in water provided by public water systems. The State Health Department and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Do I Need To Take Special Precautions?

Some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the [Safe Drinking Water Hotline 1-800-426-4791](#) or [www.epa.gov/safewater](#)

Information on Cryptosporidium and Giardia

Cryptosporidium (a protozoan) is a microbial pathogen found in surface water and groundwater under the influence of surface water. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. During 2009, as part of routine and enhanced monitoring, NYC collected 104, 50 liter volume, samples from their Catskill and Delaware Aqueduct effluents at the Kensico Reservoir and analyzed them for Cryptosporidium oocysts. In these samples, 5 Cryptosporidium oocysts were detected. Therefore, testing indicates the presence of Cryptosporidium in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. The method also cannot distinguish among different species of Cryptosporidium, only a few of which can infect humans. Ingestion of Cryptosporidium may cause cryptosporidiosis, a gastrointestinal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing a life-threatening illness. We encourage immuno-compromised individuals to consult their health care provider regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Giardia (a protozoan) is another microbial pathogen present in varying concentrations in many surface waters and groundwater under the influence of surface water. Giardia is removed/inactivated through a combination of filtration and disinfection or by disinfection alone. During 2009, as part of routine and enhanced monitoring, NYC collected 104, 50 liter volume, samples from their Catskill and Delaware Aqueduct effluents at the Kensico Reservoir, and analyzed them for Giardia cysts. In these samples, 185 Giardia cysts were detected. Therefore, testing indicates the presence of Giardia in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Please be advised, that in 2009, the City of Yonkers complied with both the State and Federal disinfection requirements that ensure that the Giardia cysts, found in our source water, were satisfactorily inactivated before the water reached our 1<sup>st</sup> customer's service connection. Ingestion of Giardia may cause giardiasis, an intestinal illness. People exposed to Giardia may experience mild or severe diarrhea, or in some instances, no symptoms at all. Fever is rarely present. Occasionally, some individuals will have chronic diarrhea over several weeks or a month, with significant weight loss. Giardiasis can be treated with anti-parasitic medication. Individuals with weakened immune systems should consult with their health care providers about what steps would best reduce their risks of becoming infected with giardiasis. Individuals who think that they may have been exposed to Giardia should contact their health care providers immediately. The Giardia parasite is passed in the feces of an infected person or animal and may contaminate water or food. Person to person transmission may also occur in day care centers or other similar settings where hand washing practices are poor. Additional information on Cryptosporidium and Giardia can be found on NYCDEP's website at [www.nyc.gov/html/dept/html/drinking\\_water/pathogen.shtml](#).

Water Quality

The New York State Sanitary Code and the EPA require us to test our water on a regular basis to ensure its safety. Every day, throughout the City, Water Department personnel conduct tests to monitor the quality of our drinking water. Most of the required compliance monitoring for the City of Yonkers, including daily bacteriological analyses, physical, inorganic, and trace metal analyses are performed by the City of Yonkers, Bureau of Water's NELAC accredited Environmental Laboratory, NYS Lab ID No. 10176. Other required monitoring tests (e.g. Synthetic Organic Contaminants including pesticides and herbicides, Radiological Contaminants, Volatile Organic Contaminants and Disinfection Byproducts) are conducted by New York State Certified Laboratories. Last year Water Department Personnel collected approximately 14,000 water samples. From those samples, tests were conducted for 175 different water contaminants. Of the 175 contaminants monitored, 29 were detected as denoted in this report.

How to Read the Tables

The tables below list the names and the amounts of all the drinking water contaminants that were detected during the 2009 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The data presented in this report is from the most recent testing done in accordance with regulations. Unless otherwise noted, the data presented in these tables is from testing done from January 1, 2009 to December 31, 2009. Oftentimes, the state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Therefore, some of the data, though representative of the water quality, is more than one year old.

The following definitions will assist you in your interpretation of the data:

**Maximum Contaminant Level or MCL:** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**Maximum Contaminant Level Goal or MCLG:** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**Action Level (AL):** The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

**Variances and Exemptions:** State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

**90<sup>th</sup> Percentile Value:** The values reported for lead and copper represent the 90<sup>th</sup> percentile. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90<sup>th</sup> percentile is equal to or greater than 90% of the lead and copper concentrations detected in our water system.

**Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no known or expected risk to health.

KEY TO TABLES	
AL = Action Level	NDL= No Designated Limits
EP = Entry Point; last point of treatment before first customer connection.	NTU = Nephelometric Turbidity Units; a measure of the clarity of water.
GT = Greater Than	pCi/L = picocuries per liter; a measure of radioactivity in water.
LT = Less Than	ppb = parts per billion or micrograms per liter (ug/L)
MCL = Maximum Contaminant Level	ppm = parts per million or milligrams per liter (mg/L)
MCLG = Maximum Contaminant Level Goal	TT = Treatment Technique
MRDL = Maximum Residual Disinfectant Level; effective January 2002.	uS/cm = microsiemens per centimeter; a measure of the ability to conduct current.
N/A = Not Applicable	l/cm = inverse centimeter
ND = Not Detected	To go from ppm (mg/L) to ppb (ug/L) multiply ppm level by 1000.

WATER QUALITY PARAMETERS USED TO ASSESS CORROSION CONTROL TREATMENT

SAMPLES WERE COLLECTED DURING THE SAME MONITORING PERIOD FIRST DRAW LEAD AND COPPER MONITORING WAS PERFORMED

Contaminant	Date Tested	Unit	MCL	MCLG	Max. Level Detected	Range of Detected Levels	Major Sources	Violation
pH (Hydrogen Ion) - <i>EP Distribution System</i>	July – Dec. 2009	units	NDL	N/A	7.44 7.53	6.78 – 7.94 7.00 – 7.53	Impacted by acid rain and the addition of water treatment chemicals.	No
Total Alkalinity – <i>EP Distribution System</i>	July – Dec. 2009	mg/L	NDL	N/A	LT 20(18.5) LT 20(19.6)	LT 20 (14.4) – 22.0 LT 20 (16.0 – 19.6)	Erosion of soil and rock formations. Impacted by Water Treatment chemicals.	No
Conductivity – <i>EP Distribution System</i>	July – Dec. 2009	uS/cm	NDL	N/A	87.4 92.0	68.0 – 114 77.0 – 92.0	Presence of ions due to erosion of natural deposits.	No
Water Temperature– <i>EP Distribution System</i>	July – Dec. 2009	°C	NDL	N/A	14.6 22.0	5.0 – 20.0 8.0 – 22.0		No
<sup>1</sup> Calcium – <i>EP Distribution System</i>	July – Dec. 2009	ppm	NDL	N/A	5.99 6.74	4.81 – 7.22 5.13 – 6.74	Erosion of soil and rock formations.	No
Orthophosphate as P- <i>EP Distribution System</i>	July – Dec. 2009	ppm	NDL	N/A	1.71 2.20	LT 0.200 – 2.25 0.412 – 2.20	Water treatment chemical added to reduce the release of lead from household plumbing.	No

MICROBIOLOGICAL CONTAMINANTS

Contaminant	Date Tested	Unit	MCL	MCLG	Maximum Level Detected	Range of Detected Levels	Major Sources	Violation
<sup>2</sup> Turbidity <i>Entry Point Distribution System</i>	Jan. 2009 Jan. 2009	NTU	TT ≤ 5 5	N/A	2.2 1.22	0.43 – 2.2 0.68 – 1.22	Soil run off	No
Free Chlorine Residual <i>Entry Point Distribution System</i> Disinfectant Residual	2009	ppm	<b>MRDL</b> 4.0	<b>MRDLG</b> 4	1.44 (Average) 1.14 (Average)	0.9 – 1.87 0.0 – 1.91	Water additive used to control microbes.	No
<sup>3</sup> Total Coliform Bacteria	2009	% Samples in any 1 month	GT 5%	0	0.7 % Sept. 2009 1 Positive Sample	N/A	Naturally present in the environment.	No

<sup>1</sup> Calcium contributes to the total hardness of water. The total hardness of our drinking water is ≈ 20.0 mg/L as CaCO<sub>3</sub>. This is considered soft. In general surface waters, such as the NYC water supply, are softer than groundwater [well waters].  
<sup>2</sup> Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High Turbidity can hinder the effectiveness of disinfectants. Entry Point data are single turbidity measurements whereas; the Distribution System data is representative of the monthly distribution sample average.  
<sup>3</sup> Coliforms are bacteria, which are naturally present in the environment. They are used as indicators that other, potentially harmful, bacteria may be present.

REGULATED INORGANIC AND PHYSICAL CONTAMINANTS								
Contaminant	Date Tested	Unit	MCL	MCLG	Max. Level Detected	Range of Detected Levels	Major Sources	Violation
Aluminum	Sept. 2009	ppb	NDL	N/A	11.7	LT 10.0 – 11.7	Erosion of Natural deposits.	
Barium	Sept. 2009	ppb	2000	2000	23.9	20.1 – 23.9	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.	No
Chloride	Oct. 2009	ppm	250.0	N/A	10.3	8.81 – 10.3	Naturally occurring or indicative of road salt contamination.	No
Color Apparent	Oct. 2009	Units	15	N/A	15	2.5 – 15	Presence of metals, copper, iron, manganese and decaying organic matter.	No
Copper	June – Sept. 2009	ppm	AL=1.3	1.3	<sup>4</sup> 0.191	0.019 – 0.939	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.	No
Fluoride	2009	ppm	2.2	N/A	<sup>5</sup> 1.06	LT 0.20 – 1.30	Erosion of natural deposits; water additive, which promotes strong teeth; discharge from fertilizer and aluminum factories.	No
<sup>6</sup> Iron	Sept. 2009	ppb	300	N/A	28.3	LT 20.0 – 28.3	Erosion of soils and natural deposits, corrosion of the interior walls of water mains.	No
Lead	June – Sept. 2009	ppb	AL=15	0	<sup>7</sup> 9.86	LT 1.00 – 67.6	Corrosion of household plumbing systems; erosion of natural deposits.	No
<sup>6</sup> Manganese	Sept. 2009	ppb	300	N/A	20.3	11.4 – 20.3	Erosion of soils and natural deposits.	No
Nitrate mg/L as Nitrogen	Feb. 2009	ppm	10	10	0.216	0.200 – 0.216	Run off from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.	No
pH (Hydrogen Ion)	2009	Units	NDL	N/A	<sup>5</sup> 7.37	6.75 – 8.35	Impacted by acid rain & the addition of water treatment chemicals.	No
<sup>8</sup> Sodium	Sept. 2009	ppm	NDL	N/A	11.7	9.74 – 11.7	Naturally occurring; road salt.	No
Sulfate	Oct. 2009	ppm	250.0	N/A	4.71	4.66 – 4.71	Naturally occurring.	No

Contaminant	Date Tested	Unit	MCL	MCLG	Level Detected	Range of Detected Levels	Major Sources	Violation
<sup>9</sup> TTHMs Total Trihalomethanes Disinfection Byproducts	2009 Quarterly Monitoring	ppb	80	<sup>10</sup> N/A	40.2 Running Annual Average	26.4 – 61.6	By-product of drinking water chlorination.	No
<sup>11</sup> HAA5 Total Haloacetic Acids (5) Disinfection Byproducts	2009 Quarterly Monitoring	ppb	60	<sup>10</sup> N/A	39.0 Running Annual Average	24 – 61	By-product of drinking water chlorination.	No
bis (2-Ethylhexyl) phthalate Synthetic Organic Contaminant	Oct. 2009	ppb	6	0	0.78	LT 0.6 – 0.78	Released during production and waste disposal of plastic products, inks, pesticides, cosmetics and vacuum pump oil.	No

On January 11, 2006 the EPA published Stage 2 of the Disinfectants and Disinfection Byproduct Rule (Stage 2 DBPR). This rule was promulgated to better protect the public health by reducing their exposure to Disinfection Byproducts (Trihalomethanes and Haloacetic Acids). In accordance with the Initial Distribution System Evaluation (IDSE) requirements in Stage 2 DBPR, the City of Yonkers chose to conduct a system specific study using a hydraulic model. In 2008, during the month of highest historic water temperature and DBP formation, one round of IDSE monitoring was performed to validate the calibrated model. Results of which are listed below: Stage 2 DBPR Compliance Monitoring goes into effect on May 20, 2012.

Contaminant	Date Tested	Unit	MCL	MCLG	Level Detected	Range of Detected Levels	Major Sources	Violation
TTHMs	Aug. 2008	ppb	80	<sup>10</sup> N/A	38	18 – 38	By-product of drinking water chlorination.	No
HAA5	Aug. 2008	ppb	60	<sup>10</sup> N/A	57	7.1 – 57	By-product of drinking water chlorination.	No

<sup>12</sup> REGULATED RADIONUCLIDE CONTAMINANTS								
Contaminant	Date Tested	Unit	MCL	MCLG	Level Detected	Range of Detected Levels	Major Sources	Violation
Gross Alpha	2004	pCi/L	15	0	0.04 Running Annual Average	-0.5 – 0.4	Erosion of natural deposits	No
Gross Beta	2004	pCi/L	<sup>13</sup> 50	0	1.7 Running Annual Average	0.3 – 3.4	Decay of natural and man-made deposits	No
Combined Radium-226/228	2004	pCi/L	5	0	0.57 Running Annual Average	-1.19 – 3.05	Erosion of natural deposits	No
Uranium 238	2004	pCi/L	<sup>14</sup> 20.3	0	0.46 Running Annual Average	LT 0.5 – 0.500	Erosion of natural deposits	No

**Additional Contaminants Monitored But Not Detected**

The inorganic contaminant asbestos was not detected in calendar year 2009’s monitoring of the vulnerable locations within the City of Yonkers’ distribution system. The *Inorganic contaminants* monitored at the points of entry to our system but not detected in calendar year 2009 include: antimony, arsenic, beryllium, cadmium, chromium, cyanide, mercury, nickel, nitrite, selenium, silver, thallium and zinc. *Organic contaminants (Pesticides, Herbicides, Dioxin, Unregulated and PCB’s)* monitored in our source waters but not detected in calendar year 2009 include: Alachlor, Aldicarb, Aldicarb sulfoxide, Aldicarb sulfone, Atrazine, Carbofuran, Chlordane, 1,2-Dibromo-3-chloropropane, 2,4-D, Endrin, Ethylene Dibromide (1,2-Dibromoethane), Heptachlor, Heptachlor epoxide, Lindane, Methoxychlor, Polychlorinated biphenyls (PCB’s), Pentachlorophenol, Toxaphene, 2,4,5-T, Silvex, Aldrin, Benzo (a) pyrene, Butachlor, Carbaryl, Dalapon, bis (2-Ethylhexyl) adipate, Dicamba, Dieldrin, Dinoseb, Diquat, Endothall, Glyphosate, Hexachlorobenzene, Hexachlorocyclopentadiene, 3-Hydroxycarbofuran, Methomyl, Metolachlor, Metribuzin, Oxamyl vdyate, Picloram, Propachlor, Simazine, 2,3,7,8-TCDD(Dioxin), 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, Acetochlor, 4,4-DDE, EPTC, Molinate, Methyl tert-butyl ether(MTBE) and Terbacil. The *Principal and Unspecified Organic contaminants* that were monitored for and not detected in our source waters include: Bromoform, Dibromochloromethane, Benzene, Bromobenzene, Bromochloromethane, Bromomethane, N-Butylbenzene, sec-Butylbenzene, tert-Butylbenzene, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloromethane, 2-Chlorotoluene, 4-Chlorotoluene, Dibromomethane, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, 1,2-Dichloropropane, 1,3-Dichloropropane, 2,2-Dichloropropane, 1,1-Dichloropropene, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, Ethylbenzene, Hexachlorobutadiene, Isopropylbenzene, p-Isopropyltoluene, Methylene Chloride, n-Propylbenzene, Styrene, 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, Tetrachloroethene, Toluene, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethene, Trichlorofluoromethane, 1,2,3-Trichloropropane, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, m-Xylene, o-Xylene, p-Xylene, 2-butanone(MEK), 4 Methyl-2-pentanone (MIBK), Naphthalene, Vinyl chloride. In accordance with the US EPA’s Unregulated Contaminant Monitoring Regulation (UCMR 2) WCWD #1, in calendar year 2008, tested and did not detect the following 25 contaminants in their source water effluent from the Kensico Reservoir: Dimethoate and Terbufos sulfone, an *insecticide and degradate*; five *Flame Retardants*, 2,2',4,4'-tetrabromodiphenyl ether, 2,2',4,4',5-pentabromodiphenyl ether, 2,2',4,4',5,5'-hexabromodiphenyl ether, 2,2',4,4',6-pentabromodiphenyl ether, 2,2',4,4',5,5'-hexabromobiphenyl; three *Explosives*, TNT, 1,3-dinitrobenzene and RDX; three *Acetanilide Herbicides*, Acetochlor, Alachlor and Metolachlor; six *Acetanilide Degradates*, Acetochlor ethane sulfonic acid, Acetochlor oxanilic acid, Alachlor ethane sulfonic acid, Alachlor oxanilic acid, Metolachlor ethane sulfonic acid, Metolachlor oxanilic acid and six *Nitrosamines*, N-nitroso-diethylamine, N-nitroso-dimethylamine, N-nitroso-di-n-butylamine, N-nitroso-di-n-propylamine, N-nitroso-methylethylamine and N-nitroso-pyrrolidine. The purpose of this UCMR 2 monitoring was to provide assessment and occurrence data to support future decisions concerning the regulation of these contaminants. In accordance with USEPA’s Long Term 2 Enhanced Surface Water Treatment Rule, WCWD #1 performed monthly Cryptosporidium Monitoring in calendar year 2009 on their source water from Kensico Dam. In the 12 samples collected no Cryptosporidium oocysts were detected. Furthermore, in calendar year 2009, the bacteria Escherichia coli (E. coli) was not detected during the microbiological (Total Coliform) compliance monitoring of the city’s water distribution system.

<sup>4</sup> The level presented represents the 90<sup>th</sup> percentile concentration of the 52 first draw residential tap samples collected between June 1, 2009 and September 30, 2009. The 90<sup>th</sup> percentile value was the 47th ascending copper concentration of the 52 samples collected. The Action Level for copper was not exceeded at any of the sites tested.

<sup>5</sup> The reported maximum level detected is the highest average observed in calendar year 2009 at anyone of our Entry Points.

<sup>6</sup> If Iron and Manganese are present, the total concentration of both should not exceed 500 ppb.

<sup>7</sup> The level presented represents the 90<sup>th</sup> percentile concentration of the 52 first draw residential tap samples collected between June 1, 2009 and September 30, 2009. The 90<sup>th</sup> percentile value was the 47th ascending lead concentration of the 52 samples collected. The Action Level for lead was exceeded at three of the sites tested.

<sup>8</sup> Water containing more than 20 ppm should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 ppm of sodium should not be used for drinking by people on moderately restricted sodium diets.

<sup>9</sup> TTHM is the sum of the concentration of chloroform, bromodichloromethane, dibromochloromethane and bromoform. These compounds have the potential to form as a result of chlorine (the disinfectant added to our drinking water) combining with the natural organics in water. The reported level detected, 40.2 ug/L, is the running annual average calculated from quarterly data results collected in calendar year 2009. Compliance is based on the average of 4 quarters of sampling results in accordance with Stage I of the DBPR.

<sup>10</sup> There is no collective MCLG for this contaminant group.

<sup>11</sup> HAA5 is the sum of the concentration of mono-, di- and trichloroacetic acids and mono-and dibromoacetic acids. They have the potential to form as a result of chlorine (the disinfectant added to our drinking water) combining with the natural organics in water. The reported level detected, 39.0 ug/L, is the running annual average calculated from quarterly data results collected in calendar year 2009. Compliance is based on the average of 4 quarters of sampling results in accordance with Stage I of the DBPR.

<sup>12</sup> Reported radiological data is representative of 4 consecutive quarterly samples collected from each of our source waters, the effluents from the Kensico Reservoir (Catskill Aqueduct South, Delaware Aqueduct South and the WCWD #1 48” Kensico Line), during calendar year 2004. Compliance is based on the running annual average of the collected samples. Since the average of each contaminant was below the required Detection Limit the frequency of continuing monitoring was reduced, by the State, to one sample every 9 years. Next sample will be collected in 2013.

<sup>13</sup> The State considers 50 pCi/L to be the level of concern for beta particles.

<sup>14</sup> The MCL for Uranium 20.3 pCi/L is equivalent to 30 ug/L. The Uranium activity is converted to Uranium mass by dividing the measured activity, pCi/L, by the mass to activity conversion, 0.677 pCi/ug.



**What Does This Information Mean?**

In accordance with State and Federal Drinking water regulations the City of Yonkers is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. Through our testing we have learned that some contaminants have been detected; however these contaminants were detected at levels below New York State requirements. As you can see from the tables, our water system had *no violations* in calendar year 2009. Since the lead concentration exceeded the Action Level of 15 ppb in more than 5% of the sites sampled we are required to present the following information on lead in drinking water. Pregnant women, infants and young children are typically more vulnerable to lead in drinking water than the general population. Elevated levels of lead can cause serious health problems. The City of Yonkers is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. Therefore, it is possible that lead levels in your home may be higher than at other homes in the community as a result of materials used in your home’s plumbing. If you are concerned about elevated levels in your home water, you may wish to have it tested. To reduce your exposure to lead in drinking water, flush your cold water tap for 30 seconds to 2 minutes before using water that has been standing in the pipes for more than six hours. Use only cold water for cooking, drinking and making baby formula. Additional information is available from the [Safe Drinking Water Hotline 1-800-426-4791](#) or [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead) and the [Westchester County Health Department, Childhood Lead Poisoning Prevention Program \(914\) 813-5240](#).

**Is Our Water System Meeting Other Rules That Govern Operations?**

The City of Yonkers is proud to report that in calendar year 2009 the City’s Water System was in compliance with all applicable State and Federal Drinking Water requirements.

**Variances, Exemptions**

In accordance with the 1986 Federal Surface Water Treatment Rule (SWTR), surface water supplies, such as the New York City Water Supply, were required by June 29, 1993 to implement specific water treatment techniques (filtration and/or disinfection) to comply with the rule’s performance standards. In 1992, the New York City Water Supply applied for and was granted a filtration avoidance waiver from the USEPA for the Catskill and Delaware supplies, south of the Kensico Reservoir, through December 31, 2002. In 2002 the EPA, upon review of New York City’s Watershed Protection Plan, extended the city’s federal filtration avoidance waiver for the Catskill and Delaware systems until 2007. In August 2006, EPA issued a report indicating that the NYC DEP had “successfully satisfied its obligations specified in the 2002 Filtration Avoidance Determination (FAD)”. Subsequently, in December 2006 the NYC DEP submitted to the EPA its 2006 Long Term Watershed Protection Program in support for renewal of its FAD for the Catskill and Delaware Systems. This program consists of several activities to enhance the protection of the City’s water supply system from contamination, degradation and pollution: land acquisition, infrastructure upgrades, protection of the watersheds natural resources, monitoring and modeling, public education and the building of a large scale ultraviolet light disinfection facility to treat the Catskill and Delaware effluents from the Kensico Reservoir. Based upon review and extensive consultations between EPA, NYC DEP, NYSDOH and the NYS DEC the EPA on July 30, 2007 issued a 10 year FAD extension, consisting of two 5 year periods 2007 - 2012 and 2012 – 2017, to the NYCDEP for the Catskill and Delaware systems south of the Kensico Reservoir. In 1992, the City of Yonkers also applied for and was granted filtration avoidance. This variance is still in effect, contingent on the City of Yonkers’ and the City of New York’s continued demonstration in meeting the avoidance criteria.

In August 29, 1994, The City of Yonkers’ Bureau of Water was granted a Biofilm variance from the New York State Department of Health. This variance recognizes that the Maximum Contaminant Level (MCL) can not be used to determine the public health significance of coliform bacteria being detected in the distribution system, when biofilms, and not contaminated water, are the source of the bacteria. Biofilms are established colonies of bacteria that have been determined not to represent an unreasonable risk to the public health.

On September 29<sup>th</sup>, 2005 the Westchester County Department of Health granted the City of Yonkers reduced lead/copper sampling as a result of achieving compliance with system wide Optimal Corrosion Control Treatment on June 30, 2005. This reduced monitoring requires that first draw lead and copper tap monitoring be performed at a frequency of once per year at a reduced number of sampling sites as prescribed in Part 5, Subpart 5-1, Section 5-1.42 of the New York State Sanitary Code.

**Water Conservation**

Why save water and how do we avoid wasting it? Fresh water is a vital and limited resource. The replenishment of the NYC Water Supply is dependent upon nature (rainfall and snowfall). Although at this time of year our supply is plentiful, there are times of the year, especially during drought periods, that the source of our supply (precipitation) is limited. Therefore, it must not be wasted. In addition, saving water saves energy and reduces the cost of energy required to treat and pump water. The City of Yonkers encourages water conservation. You can play a role in conserving water and saving yourself money by becoming conscious of the amount of water your household is using. It is not hard to conserve water. Below are a few simple steps you can take that will preserve this resource and also save up to 30% on your water bill. [For more conservation tips contact the Water Conservation Hotline @ \*\*www.westchestergov.com/planning/wateragency/homepage.htm\*\*](#).

- ◆ Install low flow showerheads, faucets and toilets.
  - ◆ Shut faucets off tightly.
  - ◆ Repair all leaks in your plumbing system (check all toilets & faucets).  
A slow dripping faucet can waste up to 20 gallons per day and a running toilet can waste up to 100 gallons/day.
  - ◆ Use your water meter to detect hidden leaks. Turn off all taps and water using appliances. Then check the meter after 15 minutes, if it moved you have a leak.
  - ◆ Limit watering the lawn to early morning and late evening hours when cooler temperatures won’t cause quick evaporation.
  - ◆ Don’t cut the lawn too short; longer grass saves water.
  - ◆ Never put water down the drain when there may be another use for it such as watering a plant or garden.
- ◆ Take shorter showers and save 5 to 7 gallons. Fill the bathtub only halfway and save 10-15 gallons.
  - ◆ Don’t run the tap unnecessarily e.g. while shaving, brushing your teeth and washing dishes. Flowing faucets use 2 to 3 gallons per minute.
  - ◆ Store drinking water in the refrigerator rather than letting the tap run every time you want a cool glass of water.
  - ◆ Run the dishwasher only when full. Automatic dishwashers use 15 gallons for every cycle.
  - ◆ Wash clothing in full loads only, saves 16 to 25 gallons.
  - ◆ Don’t hose down your driveway or sidewalk. Use a broom to clean leaves and debris.
  - ◆ Wash your car with a bucket and hose with a nozzle.
  - ◆ Connect a shut-off nozzle to your hose so water flows only when needed. When finished, turn it off at the spigot to avoid leaks.

***Please share this report with others! Landlords, businesses, and other enterprises are encouraged to share this important water quality information with users at their locations. Additional copies of this report may be obtained by contacting The City of Yonkers Water Treatment Plant at (914) 377-6764.***

***Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.***



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